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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,090	08/20/2004	John C. Tsai	60154.302301	9468

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INTELLECTUAL PROPERTY LAW OFFICES
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EXAMINER

LYONS, MICHAEL A

ART UNIT PAPER NUMBER

2877

DATE MAILED: 11/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/711,090

Applicant(s)

TSAI, JOHN C.

Examiner

Michael A. Lyons

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☒ Claim(s) 5-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments, see amendment and response filed October 24, 2006, with respect to the rejection(s) of claim(s) 5-6 under 35 USC 103 (a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the 35 USC 101 rejection as set forth below.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 5-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claim 5, although the claim is directed to a statutory class of invention (in this case, a process), the claim is directed to a judicial exception; as such, pursuant to the Interim Guidelines on Patent Eligible Subject Matter (MPEP 2106), the claim must have either physical transformation and/or a useful, concrete, and tangible result. The claim fails to include transformation from one physical state to another, and although the claims appear useful and concrete, there does not appear to be a tangible result claimed. Merely processing said interference signal to determine rotation of the target object would not appear to be sufficient to constitute a tangible result, since the outcome of the processing and determination step has not been used in a disclosed practical application nor made available in such a manner that its usefulness in a disclosed practical application can be realized. As such, the subject matter of the claim is not patent eligible.

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Further, MPEP 2106 states, "In making this determination, the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but rather on whether the final result achieved by the claimed invention is 'useful, tangible, and concrete'".

As for the dependent claims (6-7), these claims merely further limit the limitations of the claims on which they depend; as such, with no tangible result claimed, the claims are also rejected as non-statutory for the reasons set forth above.

Allowable Subject Matter

Claims 1-4 are allowed in view of the prior art.

Claims 5-7 would be allowed in view of the prior art should the 35 USC 101 rejections above be properly overcome.

The following is a statement of reasons for the indication of allowable subject matter:

As to claim 1, the prior art of record, taken either alone or in combination, fails to disclose or render obvious an apparatus for use in rotational measurement, the apparatus comprising a rotational assembly that rotates about a rotational axis; at least two interferometers that each direct a measurement beam to the rotational assembly and receives a returned beam back from the assembly; with the assembly comprising a plurality of cube corners mounted so that at least one of the corners is able to receive and reflect to an interferometer a respective measuring beam as the assembly rotates about its rotational axis; with the interferometers combining a reference beam with the received measurement beam into a detection beam that includes an interference signal, thereby permitting rotational measurement of the assembly and any attached work piece target based on processing of the interference signal, in combination with the rest of the limitations of the above claim.

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As to claim 5, the prior art of record, taken either alone or in combination, fails to disclose or render obvious a method to measure rotation in a full circle of a target object, the method comprising, among other essential method steps, placing a rotary assembly of multiple cube corner pairs distributed evenly over the full circle; combining measurement laser beams reflected from corner pairs in the circle and reference laser beams to obtain at least one detection beam indicating an interference signal, and processing the interference signal to determine rotation of the target object, in combination with the rest of the limitations of the above claim.

For further reasoning as to the allowability of the above claims, see the applicant's arguments dated October 24, 2006 in response to the previous Office action.

Conclusion

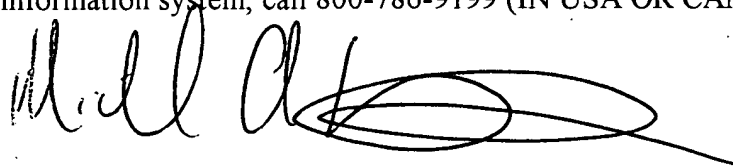
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Pat. 6,124,929 to Weibel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Lyons whose telephone number is 571-272-2420. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Michael A. Lyons', followed by a large, stylized circular flourish.

Michael A. Lyons
Patent Examiner
October 31, 2006